



## 6.6 Hazard Mitigation Activity in Arizona

Since the original Plan approval, substantial effort has been put forth to streamline the grant program application process and project monitoring. We have also implemented a program/database to capture project details, descriptions and progress photos. The information is collected from application/award documents, site visits and other types of communication. The information in the database is then used to develop success and project stories for publication in our newsletters and other outreach materials. Below is a summary of the funded projects since 2002. We are including projects prior to our original Plan approval as this information was not included in that Plan.

Mitigation Projects Funded, 2002-2007			
Disaster	#	Year	Project
N/A	PDM	2007	State Mitigation Plan Upgrade – ADEM
N/A	PDM	2007	Local Mitigation Planning – ADEM
N/A Local Funding Source	REM	2007	Santa Cruz Regional School District
N/A Local Funding Source	REM	2007	Deer Valley Unified School District
N/A Local Funding Source	REM	2007	Gilbert Public Schools
N/A Local Funding Source	REM	2007	New Century Educational Management
N/A Local Funding Source	REM	2007	Washington Elementary School District
N/A Local Funding Source	REM	2007	Maricopa Unified School District
N/A Local Funding Source	REM	2007	Marana Unified School District
Summer 2006 Monsoons & Flooding	1660	2006	In Progress
Feb 2005 Winter Storm & Flood	1586	2005	<b>Cottonwood Wash Barriers</b> – Town of Pima
Feb 2005 Winter Storm & Flood	1586	2005	Mesquite Library – City of Phoenix
Feb 2005 Winter Storm & Flood	1586	2005	State Mitigation Plan Update – ADEM
N/A	PDM	2005	Tribal Mitigation Planning – ADEM
Northern AZ Winter Storm	1581	2004	Flood Control Annex (to State Plan) – ADEM
Northern AZ Winter Storm	1581	2004	AZGS Post-Fire Debris Flow – Gila County
Northern AZ Winter Storm	1581	2004	Doodlebug Road – City of Sedona
N/A	PDM	2004	County Plan – Pima County
N/A	PDM	2004	Local Mitigation Planning – ADEM
N/A	PDM	2003	Cañada del Oro Acquisition – Pima County
Aspen Fire	1477	2003	<b>Calle Azulejo Drainage Control</b> – Santa Cruz County
Aspen Fire	1477	2003	<b>Sabino Canyon (Summerhaven) Main Line</b> – Pima County
N/A	PDM	2003	Local Mitigation Planning – ADEM
Rodeo-Chedeski Fire	1422	2002	Mitigation Plan – Navajo County
Rodeo-Chedeski Fire	1422	2002	Mitigation Plan – Mohave County
Rodeo-Chedeski Fire	1422	2002	Mitigation Plan – Maricopa County
Rodeo-Chedeski Fire	1422	2002	<b>Springerville-Eagerville</b> – Apache County
N/A	PDM	2002	State Plan/Model Plan/Online System - ADEM
Source: Mitigation Section, ADEM, 2007.			

Projects in bold print in the table above are highlighted below to provide a sampling of recent mitigation activity:

### **Cottonwood Wash Barriers**

Project Name: Cottonwood Wash Barriers

Project Number: 1586-5-2F

Disaster Name: February 2005 Winter Storm and Flood

Location: Town of Pima

Dates: September 25, 2006 – May 18, 2007

Status: Completed and Closed with FEMA



#### Description

The Town of Pima had a low-water crossing of Cottonwood Wash on 200 north. The crossing has 2 – 12" culverts underneath the concrete to handle small amounts of water. During large amounts of water including floods the Town barricades and ribbon tapes the crossing to keep motorists from crossing. The Town had built two (2) swing gates that could be closed during floods. The gates would make it where the Town would not have to have a police vehicle parked at this location for access control.

#### Summary

Cottonwood Wash is delineated as a Special Flood Hazard Area by the FEMA. Most significant rainfall events that occur within the Cottonwood Wash watershed cause sufficient flooding to render the crossing impassable and create a life threatening circumstance to motorists who would try to cross. The Town and local residents faced a 50% probability that the wash will be rendered impassable by flooding in any given year.

The intent of the project is to design and construct barrier gates at the east and west entrances of the crossing. The gates will be closed by emergency personnel or Town staff, to prevent citizens from attempting to cross during flooding conditions. The Cottonwood Wash project was approved by FEMA on August 14, 2006. The Federal Share is \$10,043 and the Non-Federal Share is \$2,457.

#### **Calle Azulejo Drainage Control Project**

Disaster Name: Aspen Fire

County: Santa Cruz

Dates: June 19, 2006 – Pending close with FEMA

Status: In Audit

#### Description

An engineering study to define and design the best possible solution to the flooding problems within the area is the first step of the proposed project. The second step is to construct the designed project. During the time of project conception, there were two possible solutions to the problem. The ideal project is to utilize an existing vacant lot across Calle Azulejo from the end of the channel to construct a small detention/retention basin and construct a box culvert to convey flow across Calle Azulejo, and to utilize the existing 15-foot wide drainage easement along the back of several properties to construct a channel to drain the basin to the natural drainage along the W. Frontage Road.

#### Summary

Heavy rainfall associated with strong thunderstorms cause flows within a channel, constructed as part of the Rio Rico Villas #13 subdivision in the early 1970's, that dead ends at the road Calle Azulejo. In the past (1996) structures have been flooded because the drainage channel does not outlet to any flow path, natural or manmade. While the areas frequently experiences flooding problems, it has yet to be part of a declared disaster. This flood control project combined a metered-flow detention basin with inverting the crown on Calle Azulejo to provide a drainage pathway for floodwater, thus, protecting people, homes and infrastructure. Santa Cruz County Flood Control District was awarded HMGP funding for this project on March 20, 2006. FEMA approved the project with an eligible cost of \$460,856. Federal share is \$345,642 (75%) and Non-Federal share is \$115,214 (25%).

#### **Summerhaven Wildland Fire Suppression**

#### Description

Due to the Aspen Fire (2003), Summerhaven experienced damages of more than 300 homes destroyed, electrical power outage for six to eight weeks and evacuated residents not being able to return for at least a full month later. Since the fire, Summerhaven has made many changes, both for public works and for private property. Building codes have been improved and a new fire suppression project is in the process of being built. A new six-inch water line 2,000 feet long is being connected to the 283,000 gallon Loma Linda water tank on the mountainside high above town. Fire hydrants on the line of every street intersection will provide protection to homes and trees in an area that was spared from previous fires. New homes in Summerhaven are being built with less flammable building and landscaping materials and with defensible space. Summerhaven has also prepared for erosion and flooding which typically occurs following wildfires.

As a result of their work on the restoration of the community, the Mount Lemmon Domestic Water Improvement District was selected as a 2006 Common Ground Award Finalist by the Metropolitan Pima Alliance.



### **Eagar Waste Water Treatment Plant Upgrade**

#### **Description**

Due to the Rodeo-Chediski Fire, Eagar became host to more than 9,800 evacuees, tripling their population overnight. The sudden population increase took its toll when Eagar's three connected sewage ponds nearly overflowed. Overflow would have caused a nasty chain of reaction of contamination. Eagar proposed to upgrade their sewage treatment with an innovative solar-powered aeration system – a system that would increase capacity and keep going if, for instance, a storm knocked out electricity. Their plan was granted and funded under the HMGP. Eagar was able to install nine solar-powered aerators in the sewage ponds and have them up and running by February 2003. Besides better protection against spills, the upgrade offered other benefits. Improved aeration, for instance, helped increase the capacity of the sewage ponds, increasing the depth of the effluent from 5.5 feet to 6.5 feet. The solar panels reduced energy costs as well.